

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
BROWNSVILLE DIVISION

IN RE THE COMPLAINT AND PETITION OF * C.A. No. B-01-157
BROWN WATER TOWING I, INC., AS * (Subject to Rule 9(h) of
OWNER, AND BROWN WATER MARINE * the Federal Rules of
SERVICE, INC., AS BAREBOAT * Civil Procedure)
CHARTERER, OF THE BROWN WATER V, * Admiralty
ITS ENGINES, TACKLE, ETC. IN A CAUSE *
OF EXONERATION FROM OR LIMITATION *
OF LIABILITY *

Consolidated With *

IN RE THE COMPLAINT AND PETITION OF * C.A. No. B-02-004
AMERICAN COMMERCIAL LINES LLC AS * (Subject to Rule 9(h) of
OWNER, and AMERICAN COMMERCIAL * the Federal Rules of
BARGE LINES, LLC, AS CHARTERER OF * Civil Procedure)
THE BARGES NM-315, VLB-9182, ACL- * Admiralty
9933B, and VLB-9173, IN A CAUSE OF *
EXONERATION FROM OR LIMITATION OF *
LIABILITY *

and *

IN RE THE COMPLAINT AND PETITION OF * C.A. No. B-02-125
DEERE CREDIT, INC. (FORMERLY * (Subject to Rule 9(h) of
SENSTAR FINANCE COMPANY), AS * the Federal Rules of
OWNER OF THE BARGE NM-315, and STATE * Civil Procedure)
STREET BANK AND TRUST COMPANY OF * Admiralty
CONNECTICUT, NATIONAL ASS'N, AS *
OWNER TRUSTEE OF THE BARGE ACL- *
9933B and NOT IN ITS INDIVIDUAL *
CAPACITY, and GENERAL ELECTRIC *
CAPITAL CORPORATION, AS BENEFICIAL *
OWNER OF THE BARGE ACL-9933B, *
PRAYING FOR EXONERATION FROM *
AND/OR LIMITATION OF LIABILITY *

and

DAVID FOWLER

V.

BROWN WATER MARINE SERVICE, INC.

AND BROWN WATER TOWING I

*

*

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*

*

*

C.A. No. H-04-0043

CLAIMANT, THE STATE OF TEXAS' DESIGNATION OF EXPERTS

COMES NOW the State of Texas (the "State") and serves its Designation of Experts in accordance with the Joint Discovery/Case Management Plan currently in effect in this matter.

Retained or Specially Employed Experts

The following individuals have been retained or specially employed by the State to provide expert testimony in this case:

1. Captain William M. Beacom
2423 Jackson Street
Sioux City, Iowa 51104

Captain Beacom may testify regarding the opinions set forth in his report, a copy of which is attached.

2. Richard F. Silloway, P.E.
Engineering Partners International, Incorporated
1310 Kingwood Drive
Kingwood, TX 77339

Mr. Silloway may testify regarding the opinions set forth in his report, a copy of which is attached.

Employees of the State

The following individuals are employees of the State whose duties do not regularly involve giving expert testimony, but who have special and unique knowledge regarding the engineering, construction, and repair of the Queen Isabella Causeway and associated costs, accounting, and record keeping issues. Since those issues could arguably be classified as expert issues, the State is, out of an abundance of caution, identifying as a potential experts:

1. Jody R. Ellington, P.E.
Pharr District Bridge Engineer
Texas Department of Transportation
P.O. Box 1717
Pharr, Texas 78577-1717

Mr. Ellington may testify regarding the opinions set forth in his report, a copy of which is attached.

2. Toribio Garza
Director of Maintenance
Texas Department of Transportation
P.O. Box 1717
Pharr, Texas 78577-1717

Mr. Garza may testify regarding the opinions set forth in his report, a copy of which is attached.

Other Experts

The following individuals have not been retained or specially employed by the State, but may still be called to provide expert testimony in this case:

1. Captain Nicholas E. Perugini
National Oceanic and Atmospheric Administration
Chief, Marine Chart Division
Office of Coast Survey
National Ocean Service, NOAA
Silver Springs, MD

Mr. Perugini may testify regarding the opinions that he rendered in his testimony during the Coast Guard hearing in this matter. A copy of the transcript of his testimony is attached, as is a copy of the Power Point that he utilized during that testimony.

2. The State may also call any expert who is designated by any other claimant in this matter.

Reservation

Because discovery is ongoing, the State reserves the right to have all the experts designated herein render supplemental or amending reports as may be necessary. Additionally, the State reserves the right to have the experts designated herein render rebuttal reports, if necessary.

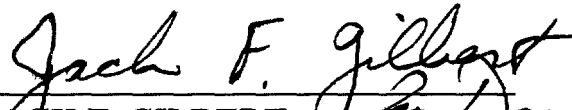

Respectfully submitted,

GREG ABBOTT
Attorney General of Texas

BARRY McBEE
First Assistant Attorney General

EDWARD D. BURBACH
Deputy Attorney General for Litigation

GRADY CLICK
Assistant Attorney General
Chief, Transportation Division


JACK F. GILBERT 
Assistant Attorney General
Attorney-in-Charge
Texas Bar No. 00786946
Federal Bar No. 16701

And Assistant Attorneys General

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AND OF COUNSEL,

ADAMS AND REESE LLP

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Texas Bar No. 06287900
Federal Bar No. 6198
4400 One Houston Center
1221 McKinney
Houston, Texas 77010
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MARK J. SPANSEL

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EDWIN C. LAIZER

La. Bar #17014

Pro Hac Vice

4500 One Shell Square

New Orleans, LA 70139

504.585.0215

Attorneys for The State of Texas

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing pleading has been served on all the following counsel of record by placing same in the United States mail, postage prepaid and properly addressed, this 30th day of September 2004:

Veronica Farias Attorney at Law 2854 Boca Chica Blvd. Brownsville, TX 78521	Keith N. Uhles Royston Rayzor, et al PO Box 3509 Brownsville, TX 78523-3509
Will W. Pierson Royston Rayzor, Vickery & Williams LLP 1700 Wilson Plaza West 606 N. Carancahua Corpus Christi, TX 78476	Glenn Gill Goodier Jones Walker Waechter Poitevant, Carrere & Denegre, LLP 201 St. Charles Ave., 50 th Floor New Orleans, LA 70170-5100
Leslie D. Cassidy, III Woolsey & Cassidy, P.C. 1020 Bank of America 500 North Water Street Corpus Christi, Texas 78471	Stephen M. Vaughan Tucker Vaughan, Mandell & Wright PC 712 Main Street, Suite 1600 Houston, TX 77002-3297
Mikal C. Watts Watts Law Firm LLP 555 North Carancahua Tower II 14 th Floor Corpus Christi, TX 78478	Ray R. Marchan Watts & Heard, LLP 1926 E. Elizabeth Brownsville, TX 78520
John David Franz Law Offices of John David Franz 400 N McColl McAllen, TX 78501	John Chadwick Gauntt Gauntt & Kuppstadt, LLP 9004 Forrest Crossing Dr., Suite C The Woodlands, TX 77381
James Baker Manley, P.C. Attorney at Law 200 William Barnett Cleveland, TX 77327	Carlos Omar Escobar Juan A. Magallanes Magallanes Hinojosa, & Mancias, P.C. 1713 Boca Chica Blvd. Brownsville, TX 78520
Geoffrey Amsel SBC Texas Legal Department 175 E. Houston Street, Room 1403 San Antonio, TX 78205	Stephen Mark Strawn Thomas Robert Ajamie Schirrmeister Ajamie LLP Pennzoil Place – South Tower 711 Louisiana S., Suite 2150 Houston, TX 77002

Francisco J. Enriquez Robert Puente Enriquez and Cantu 4200-B North Bicentennial McAllen, TX 78504	Ramon Garcia Attorney at Law 222 W. University Drive Edinburg, TX 78539
Julian Rodriguez, Jr. Julian Rodriguez, Jr. & Associates, P.C. 10113 N. 10 th Street, Suite C McAllen, TX 78504	Thomas E. Quirk Aaron & Quirk 901 NE Loop 410 Suite 903 San Antonio, TX 78209-1307
Robert E. Ammons The Ammons Law Firm LLP 3700 Montrose Blvd. Houston, TX 77006	Heriberto Medrano Attorney at Law 2009 E. Harrison, Suite B Harlingen, TX 78550
Andres H. Gonzales, Jr. Raymond L. Thomas, Jr. Kittleman Thomas, Ramirez & Gonzales 4900-B North 10 th Street, Suite B McAllen, TX 78504-2781	Steve Q. McManus McManus & Crane, LLP 209 West Juan Linn PO Box 2206 Victoria, TX 77902-2206
Jim Hart Nejd Jill Yaziji William Bailey Law Firm LLP 8441 Gulf Freeway, Suite 600 Houston, TX 77017-5001	
Richard Leo Harrell The Edwards Law Firm 802 N. Carancahua, Suite 1400 P.O. Box 480 Corpus Christi, TX 78403-0480	

Jack F. Gilbert
 JACK F. GILBERT
Ray D. S. D.

September 29, 2004

Mr. Michael Ratliff
Assistant Attorney General
Transportation Division
P.O. Box 12548
Austin, TX 78711-2548

RE: The Complaint and Petition of Brown Water Towing I, Inc., as Owner, and Brown Water Marine Service Inc., as Bareboat Charterers, of the Brown Water V, its Engines, Tackle, Etc., In a Cause of Exoneration From or Limitation of Liability Civil Action; No. B-01-157 c/w Civil Action; No. B-02-004

In the Matter of American Commercial Lines As Owner and American Commercial Barge Line LLC As Charterer of the Barges NM-315, VLB-9182, ACL-9993B, VLB-9173, Praying for Exoneration for and/or Limitation of Liability Admiralty

Dear Mr. Ratliff,

In response to your request I have reviewed the following documents in order to form an opinion concerning the above listed case.

1. Deposition of Norman S. "Sonny" Ivey
2. Deposition of Michael Khouri
3. Deposition of Douglas Charles Ruschman
4. Deposition of Patrick D. Hoessle
5. Deposition of Peter L. Kazunas
6. Deposition of William N. "Norb" Whitlock
7. Deposition of J.L. Adams
8. Deposition of Philip S. Timberlake
9. Deposition of Christian Brinkop
10. Deposition of Paul Book
11. Deposition of Stephen Mosher
12. Audio Tape Transcription of Levy Old
13. Audio Tape Transcription of David Dwayne Fowler
14. USCG Hearing Re; Allision of Brown Water Vessel with Queen Isabella Causeway, D/L September 15, 2001
15. Log Sheets; Brown Water V
16. Log Sheets of Long Island Bridge Co.,

17. News Video Tapes of Accident Scene
18. Nautical Chart, 11302, Stover Point to Port Brownsville
19. Tidal Information, NOAA, Port Isabel, Texas
20. NOAA Hydrographic Survey Results and Nautical Charting Issues Associated with Queen Isabella Causeway Bridge Collapse Oct, 10, 2001
21. USCG PSIX Information
22. Various News Reports and Articles
23. American Admiralty Bureau's Preview of a Tow Configuration and Power Guide
24. Appendix V. Tow Size Criteria for Responsible Carriers
25. Civil Action No, B-04-161; David Dewaine Fowler VS. Brown Water Towing
26. Photographs of the Port Isabel Causeway Bridge
27. Inland River Records
28. Regulations Handbook, Third Edition, Michael W. Rushing, et al.

On March 29, 2000 Peter Kazunas, assistant vice-president of Logistic Services for ACBL, wrote a letter to Stephen Mosher, vice president of operations for Brown Water Marine. He informed Mr. Mosher that because of an earlier grounding incident involving an ACBL barge, and a failure to notify ACBL in a timely manner, ACBL was engaging Marine Resources to perform an RCP audit of Brown Water Marine.

Mr. Phil Timberlake performed the audits of the M/V Brown Water VI and M/V Brown Water VII. Mr. Timberlake reported to Mr. Kazunas that there were procedural problems in crew training and wheelhouse requirements. Failure to have current Notice to Mariners and, either current maps of the area traveled or an updated older map along with any kind of training program were listed as problems. Mr. Kazunas discussed these findings with Mr. Norb Whitlock, his superior, senior vice-president of Logistic Services. A history of deficiencies and incidents on Brown Water Marine Boats was available on the USCG PSIX but was never looked at. For the next 18 months ACBL did not follow up to see if there was any improvement.

On Sept. 14, 2001, at 07:15 the Brown Water V went through the Long Island Bridge inbound with three loads. One barge was spotted and two barges were tied off. The outbound tow was built and some engine work was done. The outbound tow consisted of four loads; three barges of steel and one barge of phosphate that was supposed to be dropped at Harlingen on an earlier trip but was not. They would take it to Harlingen on this trip. The M/V Brown Water V with Capt. "Rocky" Wilson departed outbound on

Sept 14, 2001 at 21:10 with the tow of three boxes and one rake strung out. They met the M/V Brown Water VIII inbound. Just before midnight Capt. Fowler relieved Capt. Wilson at the helm. The Brown Water V went through the Long Island Bridge outbound at 01:45. While making the turn to the causeway bridge, Capt. Fowler encountered a strong tidal cross current and the tow went behind the red buoys. Capt. Fowler was unable to regain control of the tow to safely transit the bridges so he tried to stop it. He was unable to stop and allided with the bridge west of the channel span. The allision caused the bridge pier to break resulting in the collapse of the roadway.

Opinion 1. The conditions that were present at the time of the accident would have required a smaller tow, more horsepower or both for a safe transit of the area between the Long Island Swing Bridge and safely through the causeway on the night of the accident. The Brown Water VIII should have been utilized in these circumstances.

Opinion 2. Brown Water Towing's failure to include necessary checks and balances regarding safety along with rudimentary training for their personnel led to the accident. Every towing company must adhere to USCG regulations as a minimum requirement for operating safely. In March of 2000, two Brown Water boats were found not to have current Notice to Mariners or navigation charts. On Sept 15, 2001, 18 months later the Brown Water V had neither current Notice to Mariners (latest January 2000) or navigation charts (latest 1999) with no updating. Tide tables were not mentioned. Every company must recognize the need to make sure their wheelhouse crews are in co-operation with the dispatching department and use all available means to make decisions about tow size relative to existing or expected circumstances. Capt. Fowler received no training on accessing and evaluating weather and tidal data from Brown Water Marine. All of the information needed to prevent the accident could have been easily gathered the day before the accident.

Opinion 3. ACBL had information regarding Brown Water Marine's inattentiveness to deficiencies in following the USCG regulations. They also knew they had no training program. ACBL's auditor, Mr. Timberlake, referred to Brown Water Marine's failure to

have current Notice to Mariners, and current charts as a procedural matter. Failure to follow USCG regulations is not a procedural matter. Failure to document required training programs is a serious deficiency. A long list of deficiencies and incidents on Brown Water Marine Boats could have been accessed on the USCG PSIX but ACBL chose not to use this valuable database. ACBL should have required a change in Brown Water Marine's operation to improve its safety record because of the large volume of business conducted with Brown Water Marine. In spite of this opportunity and knowing these same deficiencies had already been addressed at ACBL in their Responsible Carrier Program because of safety concerns, ACBL at the highest level, neglected to address them with Brown Water Marine. The underlying problem with ACBL's corporate structure is that people with no operational experience are called upon to make operational decisions.

Opinion 4: After the accident Capt Fowler said he was surprised by the strong current between the Long Island Bridge and the Causeway, but he should have been forewarned. Why didn't Brown Water Marine provide tidal information to the Brown Water V prior to their departure? Brown Water Marine should have known that there was a tropical storm in the Gulf and made different plans for moving the VLB9173 to Harlingen.

Opinion 5. ACBL, a large, long established company, should have recognized the necessity for Brown Water Marine to operate in a safe manner. That is what being a Responsible Carrier is all about. ACBL was not a Responsible Carrier. If ACBL had applied its own standards to its vendors this accident would not have happened.

My opinions are based on my education and more than 49 years of experience in boat operation and management. I have held a Coast Guard License for 43 years. I currently hold a Master of Towing Vessels, Western Rivers, Inland Waters, and Great Lakes, a 100-ton Master's License, and a First Class Pilot's License, Tenth Issue. I also hold a Radar Endorsement, Western Rivers and Inland Waters. My credentials have been evaluated and the U.S. Coast Guard has determined that I am qualified for recognition as

a "Designated Examiner" for assessment of competence of candidates for towing vessel licenses. I have been Captain of various boats for more than 45 years.

My qualifications are set forth in my resume which is attached to this report.

I reserve the right to change or amend my opinions should new information become available.

I am charging \$1000.00 per day for my services as an expert in this case. The cases in which I have testified as an expert in court or by deposition during the past four years along with my CV are listed in the attachment to this report.

NAV-CON SERVICES

Capt. William Beacom

A handwritten signature in black ink that reads "Capt William Beacom". The signature is written in a cursive, flowing style.

Captain William M. Beacom
NAV-CON SERVICES

2423 Jackson Street ~ Sioux City, IA. 51104
712-255-3412 Fax: 712-255-0844
Email: bbeacom@pionet.net

Personal: Married 45yrs. Eight children, 29 grandchildren ~ DOB; September 20, 1940

CREDENTIALS

Master of Towing Vessels, Western Rivers, Inland Waters and Great Lakes.

100 ton Master's License, 1st Class Pilot's License, All Tenth Issue, Radar Endorsement
Western Rivers & Inland Waters

Continuous Coast Guard License for 42 years; 2002 USCG Designated Examiner all
routes of my License

PROFESSIONAL CAREER

Trip Capt. and Advisor, M/V River Explorer April 2000 – Present

Captain: M/V Omaha, Sun-De Trans. March 1995 - January 2000

Captain: M/V Belinda Brent & M/V Betty Brent, Brent/Kirby April 1974 - March 1995

R/Captain various boats, Sioux City & New Orleans Barge Lines April 1969 - April 1974

R/Captain: M/V MO-ARK, Port City Barge Lines April 1968 - April 1969

Various Positions: UMRC, Siouxland Ship 1955 - April 1968

AREAS OF EXPERTISE

Navigation Experience

Operated everything from 10hp. outboards to 5200hp. towboats with various size tows,
both commercial line and liquid, on every major tributary of the Mississippi river system,
and most of the minor tributaries, plus GICW, east and west.

Managed Salvage Operations

Mississippi, Missouri, Illinois, Arkansas, and Apalachicola Rivers, Lake Michigan and ICW

Examples of Clients as an Expert Witness

Goldstein & Price, L.C., St. Louis, MO

Henderson & Dantone, P.A. Greenville, MS

DeKoter & Thole, P.L.C., Attorneys at Law, Sibley, IA

Mouledoux, Bland, LeGrand & Brackett, L.L.C., New Orleans, LA

Heintzman, Warren, Wise, & Fornella, P.C., Pittsburgh, PA

Armstrong, Teasdale, L.L.P., St Louis, MO.

Moore, Malone, & Safreed, Owensboro, KY

Competence and Safety

Commendation, Sun-De - No Accidents on M/V Omaha - 5 Consecutive years

Recipient, Brent Safety Award - No accidents on M/V Betty Brent – 5 Consecutive years

Recipient, Devlin Safety Award for no lost time injuries - 5 years 1994

Captain, M/V Betty Brent, Kirby Corp., First Inland River Vessel to achieve ISO 9002
M/V Betty Brent passed ISM Code, and CMA Protocol, all with perfect score.

Guest Speaker, SNAME, Ship Controllability Meeting No. 97, Silver Springs, MD.

Presenter, "Missouri River", Washington DC, Smithsonian Folk Life Festival - 1996

Presenter, "Missouri River", Iowa Sesquicentennial, Des Moines, IA., Aug 22-25 1996

Mariner's Representative Safety Issues: TSAC, NOSAC, MERPAC, USCG Advisory
Committees 1998-2004

Speaker, Marine Transportation System R&D Dev. Conf. NAS, Wash. D.C.

Industry Representative, Missouri River Navigation & Environmental Issues;
1990 to present

Speaker, USCG Western Rivers Orientation Safety Training Program, including small
boat safety, 2001 Pad. KY, 2002, St Louis Mo., 2003, St. Louis, Mo.

Inland Waterways Navigational Conference, "Preserving the Value of the Inland
Waterways Through Enhanced Safety and Security", New Orleans, Mar. 16-18, 2004

ENVIRONMENTAL RESUME

Speaker on Environmental Issues, Sioux City, IA. & Sheldon, IA. Kiwanis Club

Featured Speaker on Missouri River Environmental Issues, MARC 2000,
Annual Meetings, 2000-02-03

Navigation Industry Representative on Environmental Issues, 1999-2003

Member of Sioux City Lewis & Clark Committee, 2001-02-03

Speaker, "Great Plains Symposium", March 15-16, 2001

Speaker, "Riverine Biodiversity Conference", Univ. of Colorado, July 2001

Speaker at 8 Missouri River Master Manual Meetings in 6 states, 2001

Guest Speaker, Missouri River Symposium, Univ. of Nebr., Feb. 2, 2002

Guest Speaker, Missouri River Symposium, Univ. of SD, Feb. 7, 2002

Guest Speaker, [MLDDA] Feb. 9, 2002

Guest Speaker, 6th Annual Missouri River Natural Resources Conference
April 21-24, 2002

Guest Speaker, St. Louis Industry Day, Mar 27-28, 2002
Title: Environmental Issues, and How They Affect the Industry

Guest Speaker, National Waterways Conference New Orleans, 2002, Houston, 2003
Title: "How to win Against Radical Environmentalists!"

Member of the Missouri River Keepers, Technical Committee

Member, American Fisheries Society

Presenter, UMIMRA 2004 Annual Conference, Quincy, IL. Feb 12-13-2004

Speaker, "Vanguard" Club, Kansas City, Feb, 19-2004

Presenter, MLDDA Columbia, MO., Feb. 21, 2004

Speaker, Missouri River Navigation Meeting, Kansas City, Feb 25, 2004

RECENT CASES WHERE DEPOSED OR TESTIFIED

United States District Court, Eastern District of Missouri, Eastern Division
Cause No. 4:96CV02306 CDP
Deposition: 7/22/98 Trial Appearance: 10/5/98
In the Matter of ConAgra, Inc. d/b/a Peavey Barge Lines, Plaintiffs vs. Inland River Towing, Inc.

U.S. District Court for the Southern District of Iowa, Davenport Division
In the Matter of The Complaint of AGS Chartering Co., a Corp., and Blackhawk Fleet Inc., a Corp. For exoneration from, or limitation of liability.
No.: 3-96-cv-80212
Deposition, September 10, 1999

United States District Court, Eastern District of Missouri, Eastern Division
The Matter of the Complaint of the American Milling Company, etc. et al.
Cause No. 4:98CV00575SNL
Deposition: February 15, 2000

United States District Court, Western District of Tennessee, Western Division
The Matter of Capital Towing v. Tennessee Valley Towing
Cause No. 98-2616-G/A
Deposition April 12, 2000

United States District Court, Central District of Illinois, Peoria Division
The Matter of RGC (USA), Inc. and Cigna v. ACBL and Tabor
Cause No. 99-1080
Deposition, July 14, 2000

McHenry County Court, McHenry, Illinois
The Matter of Myron Hairrell v. Winterville Marine Services Co. Inc.
Cause No. 00-LA-78
Deposition, January 12, 2001

United States District Court, Southern District of Illinois
The Matter of the Complaint of American River Transportation Company, etc
No. 00-45-DRH
Deposition, May 16, 2001

Circuit Court of Cole County, State of Missouri
The Matter of Barry F. Hatton v. Jefferson River Terminal
No. 00CV-323992
Deposition, May 23, 2001

United States District Court, Northern District of Indiana, Hammond Division
The Matter of Dead Sea Periclase, Ltd. V. American Commercial Barge Line Co. et al.
No: 2:99 CV 58-JM-1
Deposition, February 5, 2002

United States District Court, Western District of Tennessee, Western Division
Case No. 00-2736 D A, Anfernee Robert Thomas, A Minor by Parent Natural Guardian
and Next Friend, Demetria Caldwell Warren & Estate of Robert Thomas Jr., By
Administratrix, Margaret Hare, vs. American River Transport Co. and Kenny Welch and
Case No. 00-2795 M1/A File under N0. 00-276- D A, Jesse Hurd vs. American River
Transportation Co., and Kenny Welch.
Trial Appearance March 21, 2002

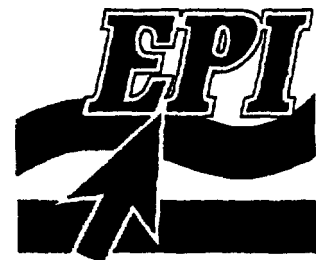
United States District Court, Eastern District of Louisiana
In the Matter of American Commercial Barge Line LLC vs. Alter Barge Line Inc.
Civil Action No. 01-0933, section 'M'. Mag. (4)
Trial Appearance, April 9, 2002

United States District Court, Eastern District of Missouri, Southeastern Division
The Matter of Missouri Barge Line Co. Inc. v. Joseph Lawerenson, et al.
No. 1:00CV 86 CDP
Deposition, January 8, 2002 Trial Appearance, June 6, 2002

United States District Court, Eastern District of Tennessee
The Matter of Rhyne v. Serodino
Docket No. 1:02-cv-218
Deposition, July 8, 2003

United States District Court, Eastern District of Louisiana
The Matter of Mid-South Towing Co., C/W Tecu Barge Line Inc.
v. Exmar Lux, et Al
No. 02--0546
Deposition, July 27, 2003

United States District Court, Western District of Tennessee, Western Division
Case No. 00-2736 D A, Anfernee Robert Thomas, A Minor by Parent Natural Guardian
and Next Friend, Demetria Caldwell Warren & Estate of Robert Thomas Jr., By
Administratrix, Margaret Hare, vs. American River Transport Co. and Kenny Welch and
Case No. 00-2795 M1/A File under N0. 00-276- D A, Jesse Hurd vs. American River
Transportation Co., and Kenny Welch.
Trial Appearance September 9-10, 2004



*Engineering Partners
International, Inc.*

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September 29, 2004

Mr. Michael Ratliff
State of Texas
Office of the Attorney General
P. O. Box 12548
Austin, TX 78711-2548

Dear Mr. Ratliff,

The following is my expert report concerning the circumstances surrounding the allision of the vessel M/V BROWN WATER V and its tow with the Queen Isabella Causeway on or about September 15.

1. I am a retired United States Naval officer, a Marine Engineer with extensive experience in both naval and commercial marine operations, and a licensed Professional Engineer. I hold a Bachelor of Science degree in Naval Engineering from the United States Naval Academy and a Masters degree in Business Administration from the University of Houston. I have pursued advanced engineering studies as part of my continuing education in Mechanical Engineering. My qualifications and credentials are more fully described in the copy of my Curriculum Vitae that is attached hereto as Exhibit "A."
2. I have been qualified as an expert in marine operations and engineering in state and federal courts in Texas, California, Louisiana and New Jersey. Listings of my publications and testimony are attached hereto as Exhibits "B" and "C", respectively.
3. I have personally inspected and examined the vessel BROWN WATER V, the affected sections of the Queen Isabella Causeway and the navigational channel that transits beneath the causeway and all aids to navigation along that channel.

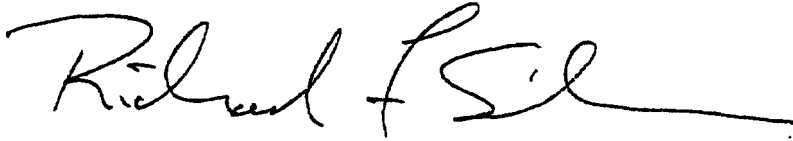
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*Licensed Professional Engineering • Accident Reconstruction Analysis • Computer Modeling & Graphics
Failure Analysis • Safety & Compliance • Liability • Personal Injury • Autos • Insurance & Litigation Support*

4. I have examined extensive documentary material in regard to this case, including, but not limited to:
 - i. All material presented/submitted at the U. S. Coast Guard investigative hearing ;
 - ii. Nautical charts of the channel and approaches;
 - iii. Reports of tidal and wind measurements in the vicinity of the channel and causeway;
 - iv. Statements by and interviews of members of the crew of BROWN WATER V.
 - v. U. S. Coast Guard records of Brown Water Marine vessels and reports of incidents involving these vessels
5. Per U. S. Coast Guard records, the vessel BROWN WATER V is a towboat powered by two diesel engines capable of developing a combined maximum of 800 brake horsepower when the engines were in top condition. These engines, however, were not in top condition.
6. Per the dimensions published by the owner of the four barges in the tow that struck the Queen Isabella Causeway and their displacement measured shortly after the allision, the total length of the tow was less than ten feet shorter than the length of an ESSEX class aircraft carrier and its total mass was in excess of 16 million pounds.
7. Per the testimony of several witnesses at the U. S. Coast Guard investigative hearing, the currents and tidal flow in the section of channel approaching the causeway from the south were regularly stronger than in other portions of the channel. The presence of a tropical depression to the east in the Gulf of Mexico exacerbated these conditions at the time of the allision between the BROWN WATER V and the Queen Isabella Causeway.
8. Tidal and weather conditions in the vicinity of the Queen Isabella Causeway are and were available to Brown Water Marine.
9. Per statements by the Captain of the BROWN WATER V, all composition and scheduling of tows throughout Brown Water Marine was directed by the offices of Brown Water Marine.
10. Per documents produced by Brown Water Marine, one of the four laden barges in the tow that struck the Queen Isabella Causeway had been brought south to Brownsville during the transit immediately preceding the northbound transit that led to the allision.
11. Per Coast Guard records of training and examination of the person in charge of piloting the BROWN WATER V at the time of the allision, there were repeated instances of failure of the navigation and piloting sections of license examinations.

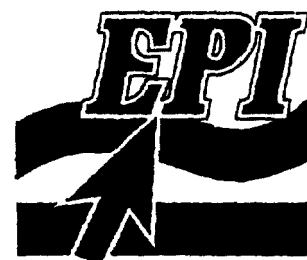
12. Coast Guard records of training and examination of individuals are available to employers and vessel owners and operators.
13. No documentation has yet been found that describes any training and/or supervision policy for Brown Water Marine vessel operators, pilots or any other personnel.
14. Per Coast Guard records, Brown Water Marine vessels have been involved in numerous groundings, allisions and even one vessel sinking (the BROWN WATER V) prior to the allision with the Queen Isabella Causeway.
15. Based on the documentation, testimony and statements thus far presented and my experience in the Marine Industry, it is my opinion that:
 - i. The BROWN WATER V was significantly underpowered for effective control of a tow of the length and mass of the four barge configuration assigned.
 - ii. The lack of effective control was further exacerbated by the unnecessary "round-tripping" of one of the barges.
 - iii. The individual piloting the BROWN WATER V at the time of the allision was improperly prepared and supervised for the northbound transit at night.
 - iv. With proper training, supervision and charts, allision with the causeway could have been avoided by continuing the turn that took the tow out the channel to the west so that the barges were deliberately grounded on the mud banks to the west of the channel. I have personally observed this having been done by a sea-going vessel that lost steering control while approaching the bridge over the Cooper River in Charleston, S. C.
 - v. Environmental conditions were not considered when ordering the transit of the BROWN WATER V tow.
 - vi. Brown Water Marine did not effectively train, supervise or monitor its vessel captains or ensure that these persons adequately trained and supervised those people assigned to their vessel.
 - vii. Brown Water Marine did not evidence the attention to and concern for maintenance, training and safety typical of a responsible vessel owner and operator.
 - viii. Barge owners that chartered Brown Water Marine to regularly move their vessels failed to responsibly consider Brown Water Marine's deficiencies as a towboat operator.

I reserve the right to further modify and supplement these opinions based on additional material and discovery as it may be developed.

A handwritten signature in black ink, appearing to read "Richard F. Silloway". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Richard F. Silloway, P.E.
Principal Marine Engineer
Engineering Partners International, Inc.

Richard Frank Silloway, P.E.
Principal Marine Engineer



*Engineering Partners
International, Inc.*

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Disciplines:

Energy & Marine.
Electrical & Mechanical.
Automotive.
Environmental Safety.
Metallurgy & Materials.
Civil & Structural.
Aviation.

PROFESSIONAL SUMMARY:

- Marine Engineer with over thirty-seven (38) years of ship, towboat, tug and barge experience in operation, design, research, modification, repair, and fleet operations with domestic and foreign flag maritime and naval vessels.
- Registered Professional Engineer by examination in South Carolina and Texas.
- Qualified Marine Arbitrator
- Chief Forensic Marine Engineer, 1998 TITANIC research expedition
- Marine Forensics Consultant, State of Maryland Science Center
- Guest Lecturer, University of Texas and Johns Hopkins University.
- Regulatory compliance specialist for maritime and marine environmental requirements at federal, state, regional and local levels.
- Experienced in litigation involving engineering technical issues, operational issues, tax liabilities, royalty issues, personal injury and death.
- Professional Marine Surveyor
- Author of technical & industry papers, economic analyses and computer programs.
- Developer of national standard for oil barge vapor emission control and prevention.
- United States Naval Reserve, Engineering Duty Officer.
- United States Navy, Commissioned Officer in Submarine Service.

PROFESSIONAL EXPERIENCE:

1996 to Present: **Engineering Partners International, Inc.**
Principal Marine Engineer

Provide design, engineering, investigative, economic analysis, training, inspection and regulatory compliance services to all facets of the marine and supporting industries. Expert in design and operation of maritime and naval vessels, atmosphere control systems, liquid cargo handling, power plants, pollution prevention, and marine casualty investigation and response.

RMS TITANIC 1998 Scientific Expedition

Conduct on-site investigation and subsequent engineering analyses to determine sequence and modes of failure and vessel breakup. Coordinate and integrate work and findings of other disciplines including Microbiology, Metallurgy, Hydrodynamics, Naval Architecture and Hydrogeology

Independent Marine Surveyor

Conduct P&I and condition surveys aboard commercial vessels including tankers, bulk cargo, OBO, and container ships for individual clients.

State of Maryland Science Center: Marine Forensics Consultant

Provide consultation on preparation of educational scientific exhibits relating to marine engineering, design and forensics.

1981 - 1996 **SeaRiver Maritime Inc./Exxon Shipping Co.**
Special Engineering, Safety & Environmental Project Director (1995 - 1996)
Designed and implemented company wide engineering drawing support system, supervised performance of contractors and conducted training for fleet operators, repair personnel, engineering staff and contractors.

Maritime Regulatory Compliance Program Director (1991-1995)

Developed and directed company company-wide program which researched, organized, published, and routinely updated all laws, statutes, and regulations directly applicable to domestic commercial maritime operations under federal, state (34), regional and local (53) jurisdictions. Conducted initial compliance inspection for all 35 company operational and support facilities, developed and implemented follow-up action and monitoring programs, and established and directed compliance audit program for company and contractors.

Consulting Engineering & Forensic Services

*Licensed Professional Engineering • Accident Reconstruction Analysis • Computer Modeling & Graphics
Failure Analysis • Safety & Compliance • Liability • Personal Injury • Autos • Insurance & Litigation Support*

Curriculum Vitae of Richard Silloway, P.E.
Engineering Partners International, Inc.
May, 2004

Economic Analyst and Customer Representative (1988-1991)

Developed company strategic and tactical business plans, designed and carried out transportation studies and economic analyses of engineering proposals. Represented the company to the U. S. Coast Guard and the American Bureau of Shipping and to taxation authorities such as Alaska, California, Maryland, New Jersey, New York, Texas and Washington. Participated in litigation support for taxation and royalty contentions and for product liability of ship main propulsion reduction gears.

Senior Engineering Project Manager (1981-1987)

Researched, designed, developed budgets and supervised work on crude oil and product tankers, barges, tugs, and towboats. Designed, installed and tested industry prototype closed loading system for barges which featured: human engineered passive tank level gauging systems (2), explosion and fire prevention measures superior to then current technology and methods, and a delivered cost per vessel 25% below company budget and 67% below best industry and federal estimates. Supervised redesign and rebuild of main reduction gears of 165,000 ton crude oil tanker including specialized machining. Supervised the design, installation and modification of cargo inerting and crude oil wash systems. Led a federal advisory sub-committee which prepared USCG and EPA regulations for ship and barge atmospheric emissions control systems and pioneered the development of engineered industrial hygiene measures for commercial ships, tugs, and towboats.

1976 - 1981 M. Rosenblatt & Son, Inc., Charleston, SC

Assistant Branch Manager and Senior Mechanical Engineer

Directed design for U. S. Naval vessel modifications for all major U. S. Naval Shipyards particularly in areas of fire suppression systems, refrigeration, HVAC, and sanitary systems. Managed a staff of 75 naval architects, engineers, technicians, designers and draftsmen.

1976 - 1996 United States Naval Reserve

Engineering Duty Officer (Captain, retired)

Concurrent with other employment, continued Naval Service with a specialty in ship design and repair. Significant accomplishments included:

- Two command tours directly supporting Naval Sea Systems Command and subordinate commands
- Developed low cost method for crude oil tanker rapid cleaning in response to national emergencies.
- Led team of evaluating alternative propulsion systems for maritime vessel life extension.
- Coordinated technical review of contracts for vessel construction, conversion and modification.
- Member of national, regional, and local policy and engineering certification boards.

1966 - 1976 United States Navy

Submarine Service

Commissioned Officer with shipboard and shore assignments in leadership, management and technical supervision of highly skilled and trained technicians ashore and afloat. Most significant assignments were: Navigator of missile submarine, oceanographic analyst/forecaster and nuclear plant operator.

EDUCATION:

B.S. (Naval Engineering), U. S. Naval Academy
MBA (International Business), University of Houston, 1986

CONTINUING EDUCATION:

U. S. Naval Postgraduate School, 1971-73, Oceanography
Clemson University, 1978-80, Mechanical Engineering

REGISTRATIONS:

Registered as a Mechanical Engineer by examination in South Carolina and Texas.

AFFILIATIONS:

- Society of Naval Architects and Marine Engineers (SNAME)
- Life Member, American Society of Naval Engineers (ASNE)
- Marine Forensic Panel SD-7 (Joint SNAME, ASNE, RINA, MLA, IME)
- Houston Marine Arbitrators Association
- National Maritime Historical Society (NMHS)
- Nautical Research Guild

**Publications and Presentations by
Richard F. Silloway, P.E.
1987 – 2004**

"Exxon Barge 502 Vapor Control"; U. S. Coast Guard Chemical Tanker Advisory Committee, Vapor Control Subcommittee; October 9, 1987; Washington D.C.

"Design and Construction of Vapor Collection Systems for Coastal and Inland River Barges"; prepared for the 1989 annual meeting of the Society of Naval Architects and Marine Engineers (SNAME), December 1989; New York (jointly with H. J. Forthuber and N. J. Beale).

"Rapid Cleaning of Crude Oil Cargo Tanks for Strategic Sealift of Clean Fuels"; Naval Reserve Engineering Symposia (2); March and April 1993; Washington, D.C. and Los Angeles, CA.

"Regulatory Compliance – Step Zero"; Technical Proceedings of the Second Maritime Environmental Symposium; American Society of Naval Engineers (ASNE); February 23 & 24, 1994.

"Explanation of Complex Engineering Concepts in Simple, Accurate Terms"; Staff Training Workshop; Maryland Science Center, February 17, 1999; Baltimore, MD.

"TITANIC Expedition 1998 – Applications of Forensic Engineering"; Maritime Industry Day; U. S. Coast Guard District 11; March 3, 1999; Honolulu, HI.

"Principles of Forensic Marine Engineering"; Texas A & M (Galveston) SNAME lecture series; September 27, 1999; Galveston, TX.

"Application of Forensic Engineering Principles to the R.M.S. TITANIC Disaster"; Innovations in Marine Technology 1999 Conference; International Workboat Show; December 2, 1999; New Orleans, LA.

"Marine Forensics"; McGraw-Hill Yearbook of Science and Technology 2000; M. D. Licker (pub.), McGraw-Hill, 1999; ISBN 0-07-052771-7; ISSN 0076-2016. (jointly with W. H. Garzke, Jr.)

"Introduction to Marine Transportation"; School of Petroleum Fundamentals, The University of Texas @ Austin; 2000 -2002; Houston, TX.

"Use of Automated Seabed Photomosaicing in Forensic Analysis of the RMS TITANIC Disaster" (jointly with Dr. P. Matthias); Oceans 2000 Conference; September 13, 2000; Providence, RI.

"Forensic Analysis of the Sinking of RMS TITANIC"; Johns Hopkins University; April 17, 2001; Baltimore, MD.

"Marine Forensics for Naval Architects and Marine Engineers"; Marine Casualty Symposium II (MARCAS 2002), February 27, 2002; Marine Institute of Technology and Graduate Studies; Linthicum Heights, MD.

Expert Witness Testimony of
Richard F. Silloway, P.E.
1997 – 2004

Deposition Date(s)	Trial Testimony Date(s)	Case	Case Type	Jurisdiction
8/29/97	n/a – settled	Lloyd J. Voisin, et al. vs. Ernst Gage Co., et al.	Personal Injury; acid spray	Superior Court of New Jersey, Essex County; Docket # ESX-L-14325-94
None	10/8/98 – 10/9/98	Canal Barge Co. vs. (1) Gulfstream Trading Ltd. and (2) Torco Oil Company	(1) Contract, (2) Tort; Barge cleaning for residue	USDC Eastern Louisiana, Civil Action 97-2674.
4/6/99	n/a – settled	Nolty Dantin Jr. vs. (1) Sea Mar Management Inc., (2) Sea Mar Inc. and (3) ABC Insurance Co.	Personal Injury; neck pain; faulty design for maintenance	USDC Eastern Louisiana, Civil Action 98-0719.
6/8/99	n/a – settled	James Taylor, et al. vs. A. P. Green Industries et al. (incl. Foster Wheeler)	Personal Injury; asbestos related disease	Superior Court of California, City & County of San Francisco; Case No. 300796
8/16/99	n/a – settled	Aubrey McDaniel et al. vs. Owens Corning, et al. (incl. Foster Wheeler)	Personal Injury; asbestos related disease	Alameda County Superior Court; Case No. 808517-1
10/20/99	n/a – Summary Judgment	Falcon Workover & Drilling Co. vs. Caterpillar, et. al.	Tort	USDC Eastern Louisiana, Civil Action 97-2628
None	11/3/99	Texas Department of Transportation vs. Halter Marine	Tort; Faulty design	Texas 122 nd Judicial District Court, Galveston County; Civil Action 97CV0797; Judge Frank Carmona

Note: Client in each case is listed in bold type

Attachment C.

Deposition Date(s)	Trial Testimony Date(s)	Case	Case Type	Jurisdiction
11/23/99	1/13/00	Soliermo vs. Foster Wheeler, et al.	Personal Injury; asbestos related disease	Harris County, Texas 334 th District Court; Civil Action 95-40540; Judge Dale Wainwright
9/12/2000	n/a – Summary Judgment	Westlake Polymers vs. Park West Children's Fund	Tort;	USDC, Southern District of Texas, Houston Division; Civil Action H-98-1349;
10/13/00	n/a – not used	LeBoeuf vs. Trahan & Brunswick Corp.	Personal Injury; outboard motor	32 nd JDC, Parish of Terrebonne, Louisiana; Civil Action 113199
5/2/01	8/23/01	Kim Susan, Inc. vs. Design Power International	Tort	USDC, Western District of Louisiana, Lafayette-Opelousas Division; Civil Action CV 00-0121 LO; Judge Barbier
8/11/01	8/13/01	Arlen Branscum vs. Asbestos Defendants (Foster Wheeler)	Personal Injury; asbestos related disease	San Francisco Superior Court, Civil Action 315446; Judge Carlos T. Bea
12/12/01	n/a – settled	Complaint of Seabulk Offshore, Ltd. as Owners of the MV SEABULK LOUISIANA for exoneration from and or Limitation of Liability	Collision at sea; Personal injury	USDC, Southern District of Texas, Houston Division; Civil Action H-00-3290;
None	3/18/02 – 3/20/02	Alfred Todak vs. Asbestos Defendants (Foster Wheeler)	Personal Injury; asbestos related disease	California Superior Court, City and County of San Francisco; Civil Action 320621; Judge John H. Munter.
1/14/04		Manisco Ltd. vs. F/V MADEE	Tort	USDC, District of Hawaii, Civil Action 02-00093

Note: Client in each case is listed in bold type

Attachment C.

Deposition Date(s)	Trial Testimony Date(s)	Case	Case Type	Jurisdiction
2/18/04 Note: deposed as pmk – case dismissed or settled prior to expert testimony	n/a – dismissed or settled	Anthony Cadlow vs. Asbestos Defendants (Foster Wheeler)	Personal Injury; asbestos related disease	California Superior Court, City and County of San Francisco, Civil Action 412325

Note: Client in each case is listed in bold type

Attachment C.



MEMORANDUM

<< CONFIDENTIAL >>

TO: Michael Ratliff
Office of Attorney General

FROM: Jody R. Ellington, P.E. *J.R. Ellington*

SUBJECT: Queen Isabella Causeway Bridge Allision & Reconstruction
General Summary Information

DATE: September 29, 2004

As the Pharr District Bridge Engineer, I am always on call to respond to emergencies dealing with bridge structures. In the early morning hours of 9/15/01, I responded to such a call from our Director of Maintenance regarding the bridge allision at the Queen Isabella Causeway. For this incident, I was responsible for overseeing the damage assessment and reconstruction design, putting together the emergency contract plans, and assisting with bridge demolition and reconstruction operations. The following summary provides general information regarding the site layout, allision and rescue/recovery operations, bridge damage assessment, bridge reconstruction design considerations, bridge demolition/debris removal and bridge reconstruction to support the Bridge Demolition and Bridge Reconstruction damage claim charges shown in the attached damage claim estimate labeled Exhibit A. I have also attached a general resume labeled Exhibit B.

SITE LAYOUT/GENERAL INFORMATION

- ◆ The Queen Isabella Causeway (QIC) located in Cameron County passes through the Laguna Madre and is the only vehicular connection to South Padre Island. It is approximately 2.5 miles long and was constructed back in 1974 by Austin Bridge Company at a cost of just under \$12,000,000. It crosses the navigable Gulf Intracoastal Waterway (GIWW), which ties into the Brownsville Ship Channel, and services the Port of Brownsville. The GIWW passes under the bridge between bents #36 & #37 at a 90 degree angle with a horizontal clearance of 275' between fenders and a vertical clearance of 73' above mean high tide.

ALLISION & RESCUE/RECOVERY OPERATIONS (9/15/01-9/24/01)

- ◆ Allision occurred 9/15/01 at approximately 1:59 am when a tug pushing 4 loaded barges heading north veered outside of the GIWW and impacted Bent #32 of the QIC causing spans #31 and #32 (both 80' long) to collapse. Note that bent #32 is 535' from the center of the GIWW, and 397.5' from the west fender system (west edge of GIWW). Later that afternoon (9/15/01), span #30 (80' long) collapsed leaving an opening of 240' in the bridge.
- ◆ DPS's dive team and CG crews recovered vehicles and victims. With two vehicles still unaccounted for several days later, a Navy dive team was brought in by the CG and was able to locate them under the debris. To help retrieve these last vehicles, the Contractor was brought in and cautiously began demolition with heavy equipment and divers until the vehicles were reached and DPS/CG finished the recovery on 9/24/01.
- ◆ Note that the TxDOT Bridge Division dive team assisted with locating vehicles within the debris and assisted TxDOT District personnel in "safety spotting" of the structure while recovery operations were conducted.

DAMAGE ASSESSMENT (9/15/01-10/12/01)

- ◆ Damage assessments began 9/15/01 as TxDOT District personnel initiating emergency procedures/contacts, and arrived at the scene. TxDOT Bridge Division assistance was requested by the

District very early that morning, and bridge design, construction and inspection experts arrived later that morning via State plane.

- ◆ The TxDOT Bridge Division dive team was also called on and after gathering together equipment and personnel, drove down and arrived just after noon on the 15th. Once they arrived with their boat and dive equipment, a detailed inspection and assessment commenced with both District and Bridge Division personnel. Due to the additional span collapse just a few hours later, time spent assisting with recovery operations, and strong currents, the main inspection and damage assessment continued through 9/24. However, after just the first few days of inspection, it was clear that there was significant damage to the foundation of the adjacent remaining bents (#30 & 33) and they as well as the spans they supported would have to be removed. It was also found that bent #26 received damage as a result of the tug/barge tow coming to rest against its south footing and would need to be repaired.
- ◆ Note that as reconstruction proceeded, supplemental underwater inspections were performed by the TxDOT Bridge Division at the District's request as follows:
 - (a) 10/9/01 - To check condition of bents #24, 25 & 27 as well as 35-37.
 - (b) 10/12/01 - To document the remains and location of bent #32.

DESIGN CONSIDERATIONS (9/15/01-9/21/01 most details)

- ◆ Conceptual design really began that same day (9/15). With the collapse of the first two spans and rescue/recovery underway the next immediate concern was re-establishing transportation to the Island. Early that morning we were considering spanning the bridge opening with a single lane prefabricated structure and were trying to make contact with suppliers. However, in the early afternoon when the additional span collapsed, we knew this was no longer an option due to the span length under consideration. There was now a 240' opening and the bents supporting the adjacent two 80' spans were damaged. A temporary crossing was no longer feasible via a single span and installation of false bents would be time consuming, costly and hinder demolition/reconstruction operations. At this point we reverted to ferry operations for temporary transportation and began discussing the new design. Through discussion among District personnel, Division personnel, potential suppliers and Williams Brothers (note that Williams Brothers was brought in early the morning of 9/15 because they were a large Contractor who had successfully completed several large bridge projects for us, had several more under construction and had significant resources available very close by), it was determined that the fastest and most economical design would be to match the original structure with the following exceptions:
 - (1) Type IV beams would be used instead of Type 54 since the fabricator was already set up for this and these beams are more stable. This also eliminated the need for diaphragms, but we did add in steel diaphragms later on to increase stiffness while at the same time providing necessary beam support during construction operations;
 - (2) Allow the change to steel rail instead of aluminum to ensure timely fabrication;
 - (3) Support the water line with steel hangers as opposed to concrete diaphragms to save time;
 - (4) Rotate the footings 45 degrees to avoid the existing piling;
 - (5) Add an additional pile to each footing to ensure adequate foundation support to limit the potential for construction delays due to having to "build-up" piles; and
 - (6) Allow the footings to be cast one foot higher than the existing to limit the potential for construction delays due to adverse tide/weather conditions.
- ◆ Design details were coordinated back and forth between the District and Bridge Division personnel beginning 9/15/01, with most details completed on 9/21/01 (sealed/signed on 9/26). During this time the District prepared the emergency PS&E package and inserted the details as part of the contract package which was executed 9/21/01.
- ◆ Additional design/details were prepared for bent #26 repairs which was added to the contract via change order #1. With piles sheared, the south footing displaced approximately 3", a cracked tie beam, and torsional cracking in the south column, the repair required a new foundation design to stabilize the bent. Concerned with possible detrimental movement pile driving operations might cause, we reverted to using drilled shaft foundations and designed lateral bracing which tied into the drilled shaft casing for support

during the tie beam removal and reconstruction. Another footing was designed to be placed on top of the existing one and the column was set up to be epoxy injected and encased.

BRIDGE DEMOLITION/DEBRIS REMOVAL

- ◆ Due to the considerable unknowns involved, an emergency "force account" contract was set up. The contract was executed with Williams Brothers on 9/21/01. Noting that some removal might be necessary even past the anticipated completion of the bridge, a termination date of 1/31/02 was set. Labor invoicing would be done based on actual labor costs plus overtime plus a 115% labor burden for longshoremen rates (work in water) plus a 25% markup (no overhead charges). Equipment invoicing would be based on blue book values and vendor rates plus a 15% markup, and materials would be billed based on invoices and a 25% markup. Subcontractor reimbursement would be based on actual invoices plus a 15% markup. Note that the contract was amended once to reduce the labor burden for work in the water from 115% to 71.21% to reflect the contractors actual cost.
- ◆ Total demolition amount paid to Williams Brothers was \$ 1,845,970.88 (\$934,548.63 through demo contract and \$911,422.25 through the reconstruction contract) through three separated invoices.
- ◆ Demolition started on 9/22/01 with the Contractor cautiously removing portions of debris to help recover the remaining trapped vehicles and securing access to the bridge via fences and armed security guards (hired DPS & SPI police). With recovery completed on 9/24, the Contractor began locating the existing/proposed bents and clearing each such that the new piles could be driven. Once the bents were clear, the Contractor removed the debris within each span, and finally removed the existing piling after the bridge reconstruction was complete.
- ◆ The Contractor used divers to locate and tie up debris as well as cut rebar to be able to remove smaller elements, and also used numerous barges, cranes and other heavy equipment. A demolition ball was used to break up the slab on span #29, whereas concrete saws were used to cut out the slab on span #33 due to stability concerns with bent #33. Beams for both spans were removed via cranes, and the bents were demolished using both a heavy wedge plate dropped from a crane as well as a heavy equipment pincher. Debris was placed on barges, transferred to the Contractor's yard and then stockpiled. It was later broken up into smaller pieces and transported off-site and disposed of. Note that for a long period of time certain elements were required to be stockpiled separately (bent #32) and guarded (via security) due to litigation concerns.
- ◆ Underwater explosives were also used to help break up and remove some of the large footings which became stuck in the mud. This was closely coordinated with the CG, Fish & Wildlife (USFWS), TPW and the National Marine Fisheries Service (NMFS), and required monitoring of endangered species which was provided by Jardin & Howard Tech, Inc. at a cost of \$4,568.04.
- ◆ Demolition also involved an existing asbestos water line and communication line attached to the bridge. Although the communication cable and conduit were cut and removed with the debris, the asbestos water line was cautiously removed in tact from the bridge and transported to the Contractor's yard. Once there it was turned over to the owner (Laguna Madre Water District) for proper disposal.
- ◆ Demolition continued up through the day before the bridge was opened (11/20/01), but not all of the debris was removed. The Contractor provided a rough map and listing of what was remaining noting that we had 10' clearance to the remaining debris. As per ACOE request to provide documentation that both the bridge area and temporary ferry landing areas were clear of debris to the mud line, we had a hydrographic survey done through our evergreen survey consultant (RODS), at a cost of \$31,000. In ACOE's 7/2/02 response, they directed us to remove the remaining debris. Concerned with the possibility of damaging the new bridge substructure by trying to remove the remaining bridge debris, we did an in-house underwater inspection and found that the debris was intermingled in and around the new substructure and it would be too risky to try and remove it. As part of this 8/24 thru 8/26/02 inspection, an underwater video camera was rented from Bay-Tech Industries at a cost of \$1,013.85, to provide documentation in convincing ACOE to let us leave the remaining bridge debris. As per a subsequent meeting with them and our request of 8/14/02, the ACOE agreed to allow us to leave the remaining bridge debris due to structural safety concerns as long as we fenced it off and documented the locations of the debris that was left. So, through our survey consultant (RODS) at a cost of \$30,000, we conducted a 2nd more detailed survey of the bridge

debris and a follow-up survey of the ferry landing for the ACOE to show that we did go back and remove the remaining piling.

- ◆ As a temporary safety measure to address the remaining bridge debris, we installed buoys (Purchase order from Marine Salvage & Services for \$1,990.00) and warning signs to delineate the danger area and to warn everyone to stay clear once reconstruction was complete and the CG removed their "safety zone". As a permanent measure, we developed plans to physically fence off the area in conjunction with a pier protection project and let this to contract in June 2002. The low bid for the fencing items was \$437,613.95 and the contract was awarded to Orion Construction. The project is nearing completion and final pay out to the contractor should be known after December 2004.

RECONSTRUCTION (10/7/01-11/21/01)

- ◆ A lump sum emergency contract was executed on 9/21/01 with Williams Brothers for \$3,043,000 with a time limit of 87 calendar days (7 day calendar job). The contract included a \$10,000 per day incentive and disincentive, with a maximum incentive of 20 days/\$200,000. As noted earlier, Williams Brothers was brought in on 9/15/01 for possible assistance based on their size, experience and available resources. They were asked to provide a bid based on preliminary design details and discussions. The District meanwhile prepared an in-house cost estimate considering typical bridge work not in the water and using statewide bid averages. The estimate did not include special mobilization, accelerated construction, etc.. The District intended to use this as a basis for comparing with the Contractors bid. With Williams Brothers bid of \$3.043 million, we were within our predetermined limit and decided to proceed.
- ◆ During the reconstruction, three change orders were executed: (1) CO#1 for \$298,000 - repairing bent #26 and increasing the incentive clause to include an additional \$75,000 per day (7 day max) beyond the original 20 day maximum; (2) CO#2 for \$42,263.56 - adding steel diaphragms to the spans and labor costs for installing the new water line; and (3) CO#3 for \$44,942.00 - replacing illumination poles/wiring and reconnecting the communication conduit to the bridge. This put the maximum amount payable at \$4,153,205.56.
- ◆ Shop Drawing Approvals <Fabricator>:
 - (1) Concrete Piling - Approved ?? <Valley Prestress>
 - (2) Type IV Prestressed Concrete Beams & Neoprene Pads - Approved 9/26 <Texas Concrete Co.>
 - (3) Precast Concrete Panels - Approved 9/28 <Valley Prestress>
 - (4) Armor Joints - Approved 10/5 <Associated Steel Fabricators>
 - (5) Permanent Metal Deck Forms - Approved 10/8 <Structural and Steel Products Inc.>
 - (6) C4 Mod Rail - Approved 10/26 <Associated Steel Fabricators>
- ◆ CIP Concrete Mix Designs:
 - (1) Class C Concrete with HRWR (trial batches 10/3-8) for footings, tie beams, columns and caps - compressive strengths were around 2,500 psi at 16 hours and 3,200 psi at 24 hours. Looking for 16 to 20 hour strength of 3,000 psi for form removal and top loading as per special provision to 420. Note that 4 day min cure was waived, with all elements membrane cured.
 - (2) Class S Concrete (trial batch 11/2) for decks - compressive strengths were 3,000 psi (3 day); 3,600 psi (5 day) and 3,800 psi (6 day).
- ◆ Construction Schedule - Construction proceeded with bents #30, 31, 33 and then 32. Following this sequence, spans #29 & 30 were constructed first, and then spans #31-33. Actual operations began with pile driving on 10/7/01 at bent #30, with pile driving taking approximately 2 days per bent (15 piles at each bent). At first, piles were left 3' short as per spec and then redriven just one day later (spec says 7 days) with very good results. Based on original construction pile driving records we expected to get 2 to 3 times resistance with the redrive. After verifying this with the first few piles, the remaining were either driven to tip elevation if there was no concern (depending upon actual resistance), or they were left 2' short and then redriven within just a few hours. This was done to ensure we would not have any time consuming build-ups. Note also that the only down days due to weather were 10/6 & 10/16.
 - (1) Bent #30 - piles 10/7-8; footings 10/10-11; tie beams/columns/cap 10/13-24
 - (2) Bent #31 - piles 10/15-17; footings 10/19; tie beams/columns/cap 10/22-10/29
 - (3) Bent #33 - piles 10/19-20; footings 10/23-25; tie beams/columns/cap 10/27-11/5

- (4) Bent #32 – piles 11/2; footings 11/3; tie beams/columns/cap 11/5-11/9
- (5) Spans #29 & 30 – set beams 11/3-4; set panels 11/5-6; tied steel 11/7-9; poured deck 11/10
- (6) Spans #31 thru 33 – set beams 11/10; set panels 11/10-11; tied steel 11/12-14; poured deck 11/15.
Spec required curing of 10 days was waived for these last three spans, with the opening of the bridge on 11/21/01 based on strength gain.
- (7) Spans #29-33 – cast rail 11/16 (used crane and bucket off of slabs poured); slip formed CTB 11/18 (limited concrete truck cy; installed lighting 11/19-20. Note that the Contractor saved several days on railing by forming and pouring with the steel element and anchor bolts already in place.
- (8) Bent #26 repairs – 11/7-12/14
- ♦ Rapid reconstruction was made possible through: (1) commitment from TxDOT, Contractor and suppliers all of whom made this project their priority and dedicated the necessary resources (personnel, material and equipment) - both TxDOT project engineer and Contractor superintendent relocated to and stayed at the site; (2) Contractor was very organized and efficient - supplies/precast elements were ordered/delivered in a timely manner, templates built for the piling were also used to support the footings, beams were marked and safety cables attached while they were on the trucks, numerous operations were ongoing concurrently, etc.; (3) Contractor and TxDOT personnel worked 24 hours a day 7 days a week; (4) Problems were dealt with immediately and solutions were partnered - support personnel were on call 24 hours a day 7 days a week, and responded immediately such that decisions could be made instantly; (5) Shop drawings were turned around in one day - requirement was written into the contract; (6) High range water reducers were used in all of the substructure cast-in-place concrete (footings, tie beams, columns and caps) allowing for form removal and top loading in 16 to 24 hours - spec required strength of 3,000 psi was met, but required 4 day minimum curing wait was waived - all were membrane cured; (7) Application of linseed oil to the deck was excluded; (8) There was very good weather - only remember a couple of days that work was hampered due to weather; and (9) There was a money incentive for the Contractor to finish early.
- ♦ Reconstruction also involved replacing two utility lines attached to the bridge - a Laguna Madre Water District (LMWD) 16" water line, and a 4" SWB fiberglass conduit/phone line. As per agreement with TxDOT, LMWD provided the new PVC water line and connection joints to tie back into the existing asbestos lines, and we provided the installation. Likewise, SWB provided the conduit and hardware for their line and we provided the installation.
- ♦ In addition to the main impact damage, bent #26 which had sustained collateral damage also had to be repaired. This damage was not found until after the contract was signed on 9/21/01, and as such was added in as part of change order #1. During repairs, concerns regarding possible bentonite contamination of the drilled shafts led to us having the Contractor remove some of the drilled shaft steel casing and us coring/testing the top few feet of the shafts. Several contaminated areas were found, but it was determined that the remaining solid core would provide adequate support. Based on this, the bridge was allowed to be opened on 11/21/01, but we needed to address long term serviceability. Our concern was with ensuring the core was and stayed in tact and contained. To accomplish this we had the Contractor patch the cored holes, replace the cut out casing and install a cathodic protection system to the steel shaft casing. To address the splash zone up, marine grade Denso wrap jackets were installed, and to address the splash zone to below the mud line, aluminum anodes were installed just above the mud line.
- ♦ The bridge was completed and opened to traffic 11/21/01, just 45 days after actual construction began and 32 days ahead of schedule (note that the incentive was for only 27 days early). Total reconstruction cost paid to Williams Brothers including change orders, incentives, overruns, etc., was \$4,074,703.00, which was \$78,502.56 less than the maximum amount payable. Other in-house related construction charges for project administration, inspection, testing, etc., amounted to \$538,744.45 (13.2%).
- ♦ As part of the reconstruction, all navigation lights were replaced. The new units were acquired via emergency purchase order from Automatic Power Inc. (cost of \$24,380) and installed by TxDOT personnel.

Under the circumstances, the Bridge Demolition and Bridge Reconstruction expenses noted above and detailed in Exhibit A were reasonable and necessary.

Note that I have not testified in trial or deposition in the last 4 years.

JRE:jre
Attach

Exhibit A

<< CONFIDENTIAL >>

QUEEN ISABELLA CAUSEWAY - DAMAGE CLAIM ESTIMATE**BRIDGE DEMOLITION****A.) Contract Charges**

(1) Invoice dated 11/16/01-1/31/02	\$355,765.98
(2) Invoice dated 10/15/01-11/15/01	\$555,856.27
(3) Invoice dated 11/1/2001	\$934,548.63
	<u>\$1,845,970.88</u>

B.) Other Charges

(1) Jardin & Howard Tech. Inc - endang species survey	\$4,568.04
(2) RODS - 1st Hydrographic Survey for ACOE	\$31,000.00
(3) Bay-Tech Industries - underwater video for inspection	\$1,013.85
(4) RODS - 2nd Hydrographic Survey for ACOE	\$30,000.00
(5) Marine Salvage & Services - buoys for safety zone (Purchase Order)	\$1,990.00
	<u>\$68,571.89</u>

C.) Fender System to Protect Remaining Debris (Orion Construction)

> Project let in 6/3/02, with low bid as follows:

(1) Concrete Piling - 5768 lf @ \$45/lf	\$259,560.00
(2) Steel Connections - 2696 lb @ \$5/lb	\$13,480.00
(3) Plastic Timber Walers - 2881 lf @ \$45/lf	\$129,645.00
(4) Aluminum Signs - 90 sf @ \$70/sf	\$6,300.00
(5) Mobilization @7%	\$28,628.95
	<u>\$437,613.95</u>

Total Bridge Demolition =	\$2,352,156.72
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BRIDGE RECONSTRUCTION**A.) Contract Charges**

(1) Invoice dated 2/7/2002	\$2,661.00
(2) Invoice dated 2/7/02	\$44,942.00
(3) Invoice dated 12/12/2001	\$2,982,050.00
(4) Invoice dated 11/1/2001	\$1,065,050.00
	<u>\$4,074,703.00</u>

B.) Construction Engineering

(1) Division & District Indirect Costs	\$429,055.93
(2) Project Supervision	\$37,460.33
(3) Job Control	\$69,131.41
(4) Design Verification/Changes	\$3,096.78
	<u>\$538,744.45</u>

C.) Purchase Orders

(1) Automatic Power Inc. - Nav lights	\$24,380.00
	<u>\$24,380.00</u>

Total Bridge Reconstr =	\$4,637,827.45
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TEMPORARY TRANSPORTATION**A.) Purchase Orders**

(1) Oden Contracting Inc. - rescue operations/standby	\$33,752.50
(2) Marine Salvage & Services - rescue standby, barges & ferry land	\$174,979.49
(3) Fish Tale Charters - Passenger Ferries	\$117,600.00
(4) Sea Ranch Marina - Dock	\$35,200.00
(5) Sea Ranch Marina - Dock	\$24,000.00
(6) South Point Marina - Dock	\$40,700.00
(7) South Point Marina - Dock	\$30,127.43
(8) Marine Salvage & Services - barges & pile driving	\$40,291.27
(9) American Diving - Passenger Ferries	\$196,800.00
(10) Captain Murphy Charter Serv - Passenger Ferries	\$291,264.00
(11) Fish Tale Charters - Passenger Ferries	\$291,264.00
(12) Ballenger Construction - Ferry access road	\$23,722.76
(13) SIGNET Maritime Corporation - tug boats for ferry landing	\$688,785.00
(14) SIGNET Maritime Corp - barges for ferry landing	\$83,450.00

Exhibit A

<< CONFIDENTIAL >>

QUEEN ISABELLA CAUSEWAY - DAMAGE CLAIM ESTIMATE

(15) SIGNET Maritime Corp - ferry landing constr.	\$2,078.00
(16) Texas Tool Co. - machine shop services for ferry landing	\$332.50
(17) ZIMCO Marine Inc. - framp hinges for ferry landing	\$8,363.21
(18) WW Grainger - winches for ferry landing	\$646.18
(19) Plitt Crane & Equipment Inc - crane rental for ferry landing	\$735.00
(20) Techline Inc - steel cable for ferry landing guard fence	\$1,575.00
(21) Marine Electric Service - wire for lighting ferry landing	\$693.20
(22) L Fernandez Trucking - RAP hauling for parking areas	\$4,275.00
(23) Holt Company of Texas - ferry repair	\$1,581.89
(24) John Bludworth Shipyard LLC - ferry repair	\$23,451.00
(25) SIGNET Maritime Corporation - ferry repair	\$2,168.86
(26) Marine Electric Service - ferry electrical service check	\$60.00
(27) Stewart & Stevenson Services - ferry repair	\$1,848.06
(28) NES Companies LP - generator rental for NCDOT ferry	\$3,510.00
(29) Movac Environmental Inc - barge bilge pumping	\$1,341.58
(30) Movac Environmental Inc - barge bilge pumping	\$504.30
(31) Movac Environmental Inc - barge bilge pumping	\$775.60
(32) Oil Patch Fuel & Supply Inc. - diesel for ferry operations	\$36,292.21
(33) Southwest Services - diesel for ferry operations	\$1,817.35
(34) Southwest Services - diesel for ferry operations	\$8,923.25
(35) Vela Enterprises - flagmen for ferry operations	\$43,740.00
(36) Enterprise Rent-A-Car - car rental for NCDOT crew	\$3,494.70
(37) A Clean Portoco - portable toilet rental for ferry operations	\$3,657.27
(38) Marine Salvage & Services - ferry landing pile removal	\$6,388.00
(39) Marine Salvage & Services - ferry landing pile removal	\$1,500.00
(40) Marine Salvage & Services - ferry landing pile removal	\$1,400.00
	<u>\$2,209,088.61</u>

B.) Contracts

(1) Marine Salvage & Services - passenger Ferries	\$920,612.00
(2) Sea Ranch Marina - dock	\$78,400.00
(3) Southpoint Marina - dock	\$90,650.00
(4) Bailenger Construction - parking Facility	\$71,214.00
(5) Mobile Bay Ferry - Fort Morgan Ferry & landing	\$1,311,161.77
(6) Chicamacomico - NCDOT Ferry	\$143,377.19
(7) Bayfront Marine, Inc - mob/demob of NCDOT Ferry	\$39,135.87
(8) Garret Construction - guard fence for landings	\$10,208.00
	<u>\$2,664,758.83</u>

C.) Reimbursements & Indirect Costs

(1) Reimb to Cameron County	\$713,491.47
(2) Reimb to South Padre Island	\$442,936.61
(3) Reimb to Port Isabel ISD	\$76,400.00
(4) Reimb to Long Island Owners Association	\$11,090.60
(5) Reimb to Texas Parks and Wildlife	\$24,614.53
(6) Reimb to State Aircraft Board	\$1,500.01
(7) Division Indirect Costs	\$51,311.67
(8) District Indirect Costs	\$48,843.89
	<u>\$1,368,188.78</u>

Total Temporary Transp. =	\$6,242,034.22
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OTHER DISTRICT EXPENSES (Mostly Temp Transp)

(1) TxDOT in-house labor, materials, equipment, supplies, etc.	\$1,063,265.16
	<u>\$1,063,265.16</u>

Total Other =	\$1,063,265.16
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GRAND TOTAL =	\$14,295,283.55
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Exhibit B

JODY R. ELLINGTON, P.E.
P.O. Box 1717
Pharr, Texas 78577-1717

WORK EXPERIENCE

District Bridge Engineer & Central Design Supervisor / TxDOT Pharr District / Pharr, Texas (6/98 – Present)

Manage and supervise all section administrative, planning, programming, engineering, consultant contract management, and bridge inspection operations, including the Districts Bridge Management Program, all District bridge related programming, design, plan preparation, and geotechnical testing, provide structural related technical assistance for all District projects, and serve as the District's contact regarding all bridge related issues. Responsibilities include, but are not limited to: establishing and interpreting rules, methods, procedures, practices and policies; hiring, training, supervising and evaluating personnel; preparing and monitoring budgets; prioritizing, scheduling, and evaluating work/projects; interviewing and selecting consultants; preparing, negotiating and managing consultant engineering, surveying and geotechnical contracts; establishing project design criteria; preparing cost estimates; supervising schematic, environmental, roadway, hydraulic, bridge, and traffic engineering design; supervising the preparation and review of construction plans, specifications and estimate (PS&E) packages; supervising the review of all District bridge layouts, scour evaluations and final bridge PS&E packages; supervising the review of bridge and retaining wall shop drawings and formwork drawings; supervising and performing bridge inspections and condition surveys; managing consultant bridge inspection contracts; overseeing the maintenance of on-system and off-system bridge inventory files and maps; developing and supervising the tracking on-system bridge maintenance/repair needs; supervising the development of bridge maintenance/repair contracts; recommending and coordinating bridge closures and postings; preparing reports and making presentations regarding TxDOT operations, policy and projects; assisting area offices with bridge construction and maintenance inspection; assisting area offices in reviewing and resolving bridge construction concerns; serving on the District consultant selection committee, serving on the statewide structures research management committee, and serving in advisory capacity to District, Division and other local, state and federal agencies regarding District bridge project development, design, inspection, construction and maintenance issues.

Director of South Texas Operations & Project Manager/ Dannenbaum Engineering Corporation / Rio Grande Valley, Texas (10/97 - 5/98)

Managed, supervised, and performed Rio Grande Valley administrative, marketing, planning, and engineering operations for highway and bridge transportation projects including, but not limited to: hiring, training, supervising and evaluating personnel; preparing and monitoring budgets and payroll; developing and maintaining effective working relationships with clients, subconsultants, local, state, federal and resource agencies, and local transportation industry personnel; preparing and making project and proposal presentations; planning, prioritizing, scheduling, supervising and evaluating work/projects; preparing engineering proposals and cost estimates; preparing, negotiating and monitoring contracts, subcontracts, and supplemental agreements; managing and coordinating subconsultant work including surveying, aerial photogrammetry, traffic studies, and geotechnical sampling/testing; developing project design criteria; supervising and performing schematic, environmental, right-of-way, utility, roadway, hydraulic, bridge, and traffic engineering design work; supervising and performing preliminary engineering route/feasibility studies; supervising and preparing engineering plans, specifications and estimate (PS&E) packages; serving on Corporate Transportation Production Committee; and interpreting TxDOT specifications and providing technical assistance to other corporate offices.

Owner & Operator / E & W Farming Company / Edcouch, Texas (10/96 – 5/98)

Half owner and operator of a 2,650 acre dryland and irrigated cotton, sorghum, corn and sugarcane farming operation. Responsibilities include, but are not limited to: managing capital and assets; marketing commodities; preparing and monitoring lease agreements/contracts; preparing and monitoring budgets and payroll; preparing and analyzing financial reports; hiring, supervising, training and evaluating personnel; developing and managing company safety program; maintaining MSDS and Workplace Chemical List files; purchasing equipment, chemicals, fertilizer and supplies; operating, maintaining, and repairing heavy

Exhibit B

equipment; planning, prioritizing and scheduling work; supervising and managing land preparation, chemical and fertilizer applications/usage, planting, cultivating, irrigating, and harvesting operations; supervising consultants and contract hire work; developing and maintaining effective working relationships with public, Irrigation District, USDA office, vendors, etc.; performing structural engineering design/analysis for implement fabrication and modifications; performing hydraulic engineering analysis for irrigation operations; and supervising field surveying and preparation of grading plans for land leveling operations.

Area Engineer & District Bridge Engineer / TxDOT Pharr District / Pharr, Texas (6/94 - 9/96)

Managed and supervised all area office administrative, planning, programming, preliminary engineering, design, construction, and maintenance operations, as well as all District bridge projects and the District BRINSAP program for various types of highway and bridge related transportation projects. Responsibilities included, but were not limited to: establishing and interpreting rules, methods, procedures, practices and policies; hiring, training, supervising and evaluating personnel; preparing and monitoring budgets; developing and programming projects; planning, developing, prioritizing, scheduling, supervising and evaluating design, BRINSAP, construction and maintenance work; providing coordination and developing/maintaining effective working relationships with utility companies, local, state, federal and resource agencies, consultants, contractors and the public regarding planning, preliminary engineering, design, construction and maintenance activities; representing the District at technical and public meetings; serving as technical advisor on research and bridge projects; preparing reports and making presentations at MPO meetings, local civic club meetings, and public meetings and hearings regarding TxDOT operations, policy and projects; preparing, negotiating and managing consultant engineering, surveying and geotechnical contracts; establishing project design criteria; preparing preliminary cost estimates; supervising and performing schematic, environmental, right-of-way, utility relocation, roadway, hydraulic, bridge, and traffic engineering design; supervising, preparing and reviewing construction plans, specifications and estimate (PS&E) packages; managing construction projects and supervising construction inspection, sampling, testing and contract administration; ensuring contract compliance and approving construction work, change orders and contract payments; managing maintenance operations for two maintenance sections and preparing, reviewing, and approving maintenance contracts, material purchases, utility permits, safety meetings, etc.; performing bridge inspections and condition surveys; performing bridge design, review and scour evaluations; ensuring all district on-system and off-system bridges were inspected and closed or load posted as required by TxDOT, FHWA and AAHTO policy and specifications; developing a bridge maintenance program and providing inspection/maintenance training to District personnel; serving in advisory capacity to District personnel and local, state and federal agencies regarding bridge project development, design and BRINSAP issues.

Area Engineer / TxDOT Pharr District (12/93 - 5/94)

Managed and supervised all area office administrative, planning, programming, preliminary engineering, design, construction, and maintenance operations for various types of highway and bridge related transportation projects. Responsibilities included, but were not limited to; establishing and interpreting rules, methods, procedures, practices and policies; hiring, training, supervising and evaluating personnel; preparing and monitoring budgets; developing and programming projects; planning, developing, prioritizing, scheduling, supervising and evaluating design, construction and maintenance work; providing coordination and developing/maintaining effective working relationships with utility companies, local, state, federal and resource agencies, consultants, contractors and the public regarding planning, preliminary engineering, design, construction and maintenance activities; representing the District at technical and public meetings; preparing reports and making presentations at MPO meetings, local civic club meetings, and public meetings and hearings regarding TxDOT operations, policy and projects; preparing, negotiating, and managing consultant engineering and surveying contracts; establishing project design criteria; preparing preliminary cost estimates; supervising and performing schematic, environmental, right-of-way, utility relocation, roadway, hydraulic, bridge, and traffic engineering design; supervising, preparing and reviewing construction plans, specifications and estimate (PS&E) packages; managing construction projects and supervising construction inspection, sampling, testing and contract administration; ensuring contract compliance and approving construction work, change orders and contract payments; managing maintenance operations for two maintenance sections and preparing, reviewing, and approving maintenance contracts, material purchases, utility permits, safety meetings, etc.

Exhibit BEngineer III / TxDOT Pharr District (9/93 - 11/93)

Managed, supervised and performed programming, planning, design, and review for project development and PS&E preparation of various types of highway and bridge transportation projects. Responsibilities included, but were not limited to; managing District Design operations in the absence of the District Design Engineer; programming and tracking projects; supervising engineers and technicians in the design, review and preparation of construction plans, specifications and estimates; managing and coordinating surveying, aerial photogrammetry, and right-of-way delineation for project development; providing coordination and maintaining effective working relationships with consultants and local, state and federal agencies with respect to utilities, right-of-way, design issues, etc.; preparing exhibits for public hearings and environmental documents; developing alignments, typical sections and schematics; supervising and performing roadway, pavement, traffic, hydraulic and bridge design; preparing and reviewing construction plans, specifications and estimate (PS&E) packages; reviewing and evaluating consultant contract proposals; monitoring consultant engineering contracts; serving as liaison between the Area Offices and Austin Divisions regarding design and PS&E issues; assisting area offices in design and construction with plan and specification interpretation, inspection, testing, and problem solving; reviewing and approving construction shop drawings and formwork details; performing bridge damage assessments and regular bridge inspections; developing details and specifications for bridge repair and maintenance; and providing technical assistance in development of maintenance contracts.

Engineer II / TxDOT Pharr District (2/93 - 8/93)

Managed, supervised and performed planning, design, and review for project development and PS&E preparation of various types of highway and bridge transportation projects. Responsibilities included, but were not limited to: supervising engineers and technicians in the design, review and preparation of construction plans, specifications and estimates; managing and coordinating surveying, aerial photogrammetry, and right-of-way delineation for project development; providing coordination and maintaining effective working relationships with consultants and local, state and federal agencies with respect to utilities, right-of-way, design issues, etc.; preparing exhibits for public hearings and environmental documents; developing alignments, typical sections and schematics; supervising and performing roadway, pavement, traffic, hydraulic and bridge design; preparing and reviewing construction plans, specifications and estimate (PS&E) packages; reviewing and evaluating consultant contract proposals; serving as liaison between the Area Offices and Austin Divisions regarding design and PS&E issues; assisting area offices in design and construction with plan and specification interpretation, inspection, testing, and problem solving; reviewing and approving construction shop drawings and formwork details; performing bridge damage assessments and regular bridge inspections; and developing details and specifications for bridge repair and maintenance.

Engineer I / TxDOT Pharr District / Pharr, Texas (12/90 - 1/93)

Supervised and performed design and review for project development and PS&E preparation of various types of highway and bridge transportation projects. Responsibilities included, but were not limited to: supervising a design/review team of engineers and technicians in the preparation and review of construction plans, general notes, standard specifications, special provisions and estimates; performing and reviewing roadway, pavement, traffic, hydraulic and bridge design; preparing and reviewing construction plans, specifications and estimate (PS&E) packages; reviewing and approving construction shop drawings and formwork details; serving as liaison between Area Offices and Austin Divisions regarding design and PS&E issues; assisting area offices with plan/specification interpretation and problem solving; assisting District Construction Engineer in conducting field investigations, coordinating with various TxDOT Divisions, and resolving construction problems; performing bridge damage assessments and regular bridge inspections; and developing details and specifications for bridge repair and maintenance.

Engineering Assistant III / TxDOT Pharr District / Pharr, Texas (9/89 - 11/90)

Supervised and performed design and review for project development and PS&E preparation of various types of highway and bridge transportation projects. Responsibilities included, but were not limited to: performing and reviewing roadway design; performing and reviewing flexible pavement designs; performing and reviewing hydrology computations; performing and reviewing hydraulic designs for bridges, culverts, open channels and